Solving Equations with Variables on Both Sides

$$6x - 7 = x + 23$$
$$6x - x - 7 = x - x + 23$$
$$5x - 7 = 23$$
$$5x = 30$$
$$x = 6$$

Solve each equation for the given variable.

1. $2x - 7 = 3x + 4$ — -11
2. $-7c + 9 = c + 1$ — 1
3. $4(2y - 4) = 5y + 2$ — 6
4. $-6 - -2n = 3n - (6 + 5)$ — 5
5. $4(t + 5) - 3 = 6t - 13$ — 15
6. $2(r - 4) = 5(r + -7)$ — 9
7. $7 - 6a = 6 - 7a$ — -1
8. $12m - 9 = 4m + 15$ — 3
9. $8(x - 3) + 8 = 5x - 22$ — -2
10. $3c - 12 = 14 + 5c$ — -13
11. $9a + 5 = 3a - 1$ — -1
12. $6(x - 9) = 4(x - 5)$ — 17
13. $2(x - 4) + 8 = 3x - 8$ — 8
14. $3x - 3 = -3x + -3$ — 8
15. $-10x + 6 = -7x + -9$ — 5
16. $5 + 3x = 7(x + 3)$ — -4
17. $\frac{5}{2}x + 3 = \frac{1}{2}x + 15$ — 6
18. $2x + 6 = 5x - 9$ — 5
19. $4e - 19 = -3(e + 4)$ — 1
20. $5t + 7 = 4t - 9$ — -16